

**Luminex**  
complexity simplified.



**Flow Cytometry with Vision.**

Amnis<sup>®</sup> ImageStream<sup>™</sup> Mk II and  
FlowSight<sup>™</sup> Imaging Flow Cytometers

**LEARN MORE >**



**127 (6)**

*J Immunol* 1981; 127:2199-2620; ;  
<http://www.jimmunol.org/content/127/6.citation>

This information is current as  
of September 20, 2019.

**Why *The JI*?** [Submit online.](#)

- **Rapid Reviews! 30 days\*** from submission to initial decision
- **No Triage!** Every submission reviewed by practicing scientists
- **Fast Publication!** 4 weeks from acceptance to publication

*\*average*

- Subscription** Information about subscribing to *The Journal of Immunology* is online at:  
<http://jimmunol.org/subscription>
- Permissions** Submit copyright permission requests at:  
<http://www.aai.org/About/Publications/JI/copyright.html>
- Email Alerts** Receive free email-alerts when new articles cite this article. Sign up at:  
<http://jimmunol.org/alerts>

*The Journal of Immunology* is published twice each month by  
The American Association of Immunologists, Inc.,  
1451 Rockville Pike, Suite 650, Rockville, MD 20852  
All rights reserved.  
Print ISSN: 0022-1767 Online ISSN: 1550-6606.



# Contents

## CELLULAR IMMUNOLOGY

- |  |      |  |
|--|------|--|
| A. W. Yem and M. J. Parmely  | 2245 | Modulation of Ia-Like Antigen Expression and Antigen-Presenting Activity of Human Monocytes by Endotoxin and Zymosan A   |
| P. W. Kincade, G. Lee, T. Watanabe, L. Sun, and M. P. Scheid   | 2262 | Antigens Displayed on Murine B Lymphocyte Precursors   |
| E. Gomard, J. Wybier-Franqui, M. C. Simmler, I. F. C. McKenzie, and J. P. Levy                           | 2291 | Accessory Cells in the <i>in Vitro</i> Generation of Type C Virus-Specific T Killer Lymphocytes. II. Demonstration of a T Helper Cell in the Spleen of <i>in Vivo</i> Primed Mice                          |
| M. C. Woan and D. D. McGregor  | 2319 | T Cell-Mediated Cytotoxicity Induced by <i>Listeria monocytogenes</i> . I. Activation of <i>Listeria</i> Antigen-Responsive T Cells  |
| M. C. Woan, D. D. McGregor, and U. Forsum  | 2325 | T Cell-Mediated Cytotoxicity Induced by <i>Listeria monocytogenes</i> . II. Specificity of Cytolytic Effector Cells  |
| M. C. Woan, D. D. McGregor, and I. Goldschneider   | 2330 | T Cell-Mediated Cytotoxicity Induced by <i>Listeria monocytogenes</i> . III. Phenotypic Characteristics of Mediator T Cells  |
| J. M. Ely, M. B. Prystowsky, L. Eisenberg, J. Quintans, E. Goldwasser, A. L. Glasebrook, and F. W. Fitch | 2345 | Alloreactive Cloned T Cell Lines. V. Differential Kinetics of IL 2, CSF, and BCSF Release by a Cloned T Amplifier Cell and Its Variant   |
| J. H. Finke, S. D. Sharma, and J. W. Scott   | 2354 | Generation of Alloreactive Cytotoxic T Lymphocytes: Production of T Cell and M $\phi$ Helper Factors in Addition to IL 1 and IL 2 by Peritoneal Cells from Mice Immunized to <i>Listeria monocytogenes</i> |
| A. M. Ferreira, M. Hurme, M. Kaartinen, and O. Makela  | 2366 | Fine-Specificity of the Immune Response to Oxazolone. I. Contact Sensitivity and Early Antibodies  |
| M. Kaartinen, A. M. Ferreira, M. Hurme, and O. Makela  | 2371 | Fine-Specificity of the Immune Response to Oxazolones. II. Cytolytic T Cells   |
| A. Bacigalupo, M. Podesta, F. Frassoni, A. Marmont, M. Rizzo, and G. Corte                               | 2415 | A Monoclonal Antibody to Antigens Expressed on MLR-Activated T Cells Inhibits Granulocyte Macrophage Colony Formation  |
| K. H. Stenzel, A. L. Rubin, and A. Novogrodsky   | 2469 | Mitogenic and Co-mitogenic Properties of Hemin   |
| J. Bruce, F. W. Symington, T. J. McKearn, and J. Sprent  | 2496 | A Monoclonal Antibody Discriminating between Subsets of T and B Cells  |
| H. Jyonouchi, P. W. Kincade, and R. A. Good  | 2502 | Immunosuppression of Marrow B Lymphocytes by Administration of <i>Corynebacterium parvum</i> in Mice   |
| A. Knyszynski and H. Fischer   | 2508 | Circadian Fluctuations in the Activity of Phagocytic Cells in Blood, Spleen and Peritoneal Cavity of Mice as Measured by Zymosan-Induced Chemiluminescence   |
| B. A. Peri and R. M. Rothberg  | 2520 | Specific Suppression of Antibody Production in Young Rabbit Kits after Maternal Ingestion of Bovine Serum Albumin  |
| E. L. Morgan, M. L. Thoman, and W. O. Weigle   | 2526 | Enhancement of T Lymphocyte Functions by Fc Fragments of Immunoglobulin. II. Augmentation of the Cell-Mediated Lympholysis Response Occurs Through an Lyt-1 <sup>+</sup> 2 <sup>-</sup> Helper T Cell      |
| C. Raffel and S. Sell  | 2530 | Individual Rabbit Peripheral Blood Lymphocytes Reactive to Anti-immunoglobulin and Phytohemagglutinin or Concanavalin A Identified by Immunoelectronmicroscopic Demonstration of Endocytosis               |
| W. van Ewijk, P. L. van Soest, and G. J. van den Engh  | 2594 | Fluorescence Analysis and Anatomic Distribution of Mouse T Lymphocyte Subsets Defined by Monoclonal Antibodies to the Antigens Thy-1, Lyt-1, Lyt-2, and T-200  |

## CLINICAL IMMUNOLOGY

- |  |      |  |
|--|------|--|
| T. M. Ellis, H. M. Lee, and T. Mohanakumar                                   | 2199 | Alterations in Human Regulatory T Lymphocyte Subpopulations after Renal Allografting                 |
| M. P. Bodger, G. E. Francis, D. Delia, S. M. Granger, and G. Janossy         | 2269 | A Monoclonal Antibody Specific for Immature Human Hemopoietic Cells and T Lineage Cells              |
| A. Kagey-Sobotka, M. Dembo, B. Goldstein, H. Metzger, and L. M. Lichtenstein | 2285 | Qualitative Characteristics of Histamine Release from Human Basophils by Covalently Cross-Linked IgE |

Continued on page 4

Published monthly by The Williams & Wilkins Co., 428 E. Preston St., Baltimore, Md. 21202, U.S.A.

Subscription price \$125.00 individuals, \$145.00 institutions, single issue \$12.00

Second class postage paid at Baltimore, Md. 21202 and at additional mailing offices.

Continued from page 3

|  |      |   |
|--|------|---|
| P. J. José, M. J. Forrest, and T. J. Williams                            | 2376 | Human C5a des Arg Increases Vascular Permeability   |
| J. R. Ortaldo, S. O. Sharrow, T. Timonen, and R. B. Herberman            | 2401 | Determination of Surface Antigens on Highly Purified Human NK Cells by Flow Cytometry with Monoclonal Antibodies  |
| D. W. MacGlashan, Jr. and L. M. Lichtenstein                             | 2460 | The Transition from Specific to Nonspecific Desensitization in Human Basophils  |
| R. S. Accolla, A. Moretta, and J.-C. Cerottini                           | 2438 | Allogeneic Mixed Lymphocyte Reactions in Humans: Pretreatment of Either the Stimulator or the Responder Cell Population with Monoclonal Anti-Ia Antibodies Leads to an Inhibition of Cell Proliferation |
| C. A. Dinarello, L. J. Rosenwasser, and S. M. Wolff                      | 2517 | Demonstration of a Circulating Suppressor Factor of Thymocyte Proliferation during Endotoxin Fever in Humans  |
| K. James, B. Hansen, and H. Gewurz                                       | 2539 | Binding of C-reactive Protein to Human Lymphocytes. I. Requirement for a Binding Specificity  |
| K. James, B. Hansen, and H. Gewurz                                       | 2545 | Binding of C-reactive Protein to Human Lymphocytes. II. Interaction with a Subset of Cells Bearing the Fc Receptor  |
| R. Yarchoan, B. R. Murphy, W. Strober, H. S. Schneider, and D. L. Nelson | 2588 | Specific Anti-Influenza Virus Antibody Production <i>in Vitro</i> by Human Peripheral Blood Mononuclear Cells   |
| S. P. James, G. G. Yenokida, A. S. Graeff, C. O. Elson, and W. Strober   | 2605 | Immunoregulatory Function of T Cells Activated in the Autologous Mixed Lymphocyte Reaction  |

---

### IMMUNOCHEMISTRY

---

|  |      |   |
|--|------|---|
| A. R. Pecoud and D. H. Conrad  | 2208 | Characterization of the IgE Receptor by Tryptic Mapping   |
| A. P. Dalmasso and B. A. Benson  | 2214 | Lesions of Different Functional Size Produced by Human and Guinea Pig Complement in Sheep Red Cell Membranes  |
| R. B. Levy, J. C. Richardson, E. M. Cudkowicz, P. A. Henkart, and G. M. Shearer                  | 2218 | Cell-Mediated Lympholytic Responses against Autologous Cells Modified with Haptenic Sulfhydryl Reagents. III. Different Regions of Hapten-Membrane Protein Conjugates Influence CTL Specificity and <i>Ir</i> Gene Control of Hapten-Self CTL Responses |
| S.-T. Ju and M. E. Dorf  | 2224 | Cross-Induction of Predominant NP <sup>b</sup> Idiotypic Antibodies with Derivatives of (4-Hydroxy-3-Nitrophenyl) Acetyl  |
| M. B. Frank, J. Watson, D. Mochizuki, and S. Gillis  | 2361 | Biochemical and Biologic Characterization of Lymphocyte Regulatory Molecules. VIII. Purification of Interleukin 2 from a Human T Cell Leukemia  |
| R. C. Bleackley, B. Caplan, A. Havale, R. G. Ritzel, T. R. Mosmann, J. J. Farrar, and V. Paetkau | 2432 | Translation of Lymphocyte mRNA into Biologically-Active Interleukin 2 in Oocytes  |
| G. Corradin, R. H. Zubler, and H. D. Engers  | 2442 | Clonal Analysis of the BALB/c T Cell Proliferative Response to APO Beef Cytochrome <i>c</i>   |
| R. C. Siegel, V. N. Schumaker, and P. H. Poon  | 2447 | Stoichiometry and Sedimentation Properties of the Complex Formed between the C1q and C1r <sub>2</sub> C1s <sub>2</sub> Subcomponents of the First Component of Complement   |
| A. Bhattacharya, M. E. Dorf, and T. A. Springer  | 2488 | A Shared Alloantigenic Determinant on Ia Antigens Encoded by the I-A and I-E Subregions: Evidence for I Region Gene Duplication   |
| T. J. Lukas, H. Muñoz, and B. W. Erickson  | 2555 | Inhibition of C1-Mediated Immune Hemolysis by Monomeric and Dimeric Peptides from the Second Constant Domain of Human Immunoglobulin G  |
| O. A. Batuman, R. R. Schmidt, and S. P. Hauptman   | 2560 | Macromolecular Insoluble Cold Globulin (MICG): A Marker for Embryonic Prothymocytes in the Mouse  |
| J. M. McCune and S. M. Fu  | 2609 | Ig Biosynthesis in a Human Pre-B Cell Line  |

---

### IMMUNOGENETICS AND TRANSPLANTATIONS

---

|   |      |   |
|---|------|---|
| T. H. Hansen, W. D. Walsh, K. Ozato, J. S. Arn, and D. H. Sachs | 2228 | Ia Specificities on Parental and Hybrid Cells of an I-A Mutant Mouse Strain   |
| W. E. Biddison, G. M. Shearer, and S. Shaw                      | 2231 | Influenza Virus-Specific Cytotoxic T Cells Are Restricted by Multiple HLA-A3-Related Self Antigens: Evidence for Recognition of Distinct Self Structures in Conjunction with Different Foreign Antigens |
| W. E. Biddison, G. M. Shearer, and T. W. Chang                  | 2236 | Regulation of Influenza Virus-Specific Cytotoxic T Cell Responses by Monoclonal Antibody to a Human T Cell Differentiation Antigen  |

Continued on page 5

Continued from page 4

|   |      |  |
|---|------|--|
| G. B. Ahmann, P. I. Nadler, A. Birnkrant, and R. J. Hodes                 | 2308 | T Cell Recognition in the Mixed Lymphocyte Response. II. Ia-Positive Splenic Adherent Cells Are Required for Non- <i>I</i> Region-Induced Stimulation  |
| P. Gros, E. Skamene, and A. Forget  | 2417 | Genetic Control of Natural Resistance to <i>Mycobacterium bovis</i> (BCG) in Mice  |
| M. Muto, T. Sado, S. Aizawa, H. Kamisaku, and E. Kubo                     | 2421 | Bone Marrow Transplantation across the Major Histocompatibility Barrier in Specific-Pathogen-Free Mice: Effects of Intact <i>versus</i> T Cell-Depleted Bone Marrow on the Expression of Anti-Host Reaction in the Recipient Spleens |
| S. Aizawa, T. Sado, M. Muto, and E. Kubo                                  | 2426 | Immunology of Fully H-2 Incompatible Bone Marrow Chimeras Induced in Specific-Pathogen-Free Mice: Evidence for Generation of Donor- and Host-H-2 Restricted Helper and Cytotoxic T Cells   |
| J. A. Berzofsky, D. S. Pisetsky, D. J. Killian, G. Hicks, and D. H. Sachs | 2453 | <i>Ir</i> Genes of Different High Responder Haplotypes for Staphylococcal Nuclease Are Not Allelic   |
| G. A. Dos Reis and E. M. Shevach  | 2456 | The Syngeneic Mixed Leukocyte Reaction Represents Polyclonal Activation of Antigen-Specific T Lymphocytes with Receptors for Self-Ia Antigens  |
| D. Hetzelberger, M. M. Simon, and K. Eichmann                             | 2512 | Genetic Control of B Cell Function. II. Antibody Responses of Inbred Mice to Red Blood Cells Are Controlled at the B Cell Level  |
| M. E. Shapiro, S. J. Burakoff, B. Benacerraf, and R. W. Finberg           | 2571 | <i>Ir</i> Gene Control of the Cytotoxic T Lymphocyte Response to Sendai Virus: H-2 <sup>k</sup> Mice Are Low Responders to Sendai  |

---

### IMMUNOPATHOLOGY

---

|   |      |   |
|---|------|---|
| T. G. Cotter, P. J. Keeling, and P. M. Henson   | 2241 | A Monoclonal Antibody-Inhibiting FMLP-Induced Chemotaxis of Human Neutrophils   |
| C. M. Fischman, M. C. Udey, M. Kurtz, and H. J. Wedner                                    | 2257 | Inhibition of Lectin-Induced Lymphocyte Activation by 2-Cyclohexene-1-one: Decreased Intracellular Glutathione Inhibits an Early Event in the Activation Sequence             |
| R. T. Schoen, H. Mehlman, D. E. Trentham, L. Perry, M. I. Greene, and J. R. David         | 2275 | Autoimmunity Induced by Type II Collagen-Coupled Spleen Cells   |
| E. H. van Elven, F. M. van der Veen, A. G. Rolink, P. Issa, T. M. Duin, and E. Gleichmann | 2435 | Diseases Caused by Reactions of T Lymphocytes to Incompatible Structures of the Major Histocompatibility Complex. V. High Titers of IgG Autoantibodies to Double-Stranded DNA |
| N. F. Pierce and W. C. Cray, Jr.  | 2461 | Cellular Dissemination of Priming for a Mucosal Immune Response to Cholera Toxin in Rats  |
| M. J. Dauphinée, S. B. Kipper, D. Wofsy, and N. Talal                                     | 2483 | Interleukin 2 Deficiency is a Common Feature of Autoimmune Mice   |
| M. Rola-Plezczyński, S. Massé, P. Sirois, I. Lemaire, and R. Bégin                        | 2535 | Early Effects of Low-Dose Exposure to Asbestos on Local Cellular Immune Responses in the Lung   |
| M. S. O'Dorisio, N. S. Hermina, T. M. O'Dorisio, and S. P. Balcerzak                      | 2551 | Vasoactive Intestinal Polypeptide Modulation of Lymphocyte Adenylate Cyclase  |

---

### MICROBIAL IMMUNOLOGY

---

|   |      |   |
|---|------|---|
| H. D. Engers, J. A. Louis, R. H. Zubler, and B. Hirt  | 2280 | Inhibition of T Cell-Mediated Functions by MVM(i), A Parvovirus Closely Related to Minute Virus of Mice   |
| E. A. Ojo-Amaize, L. S. Salimonu, A. I. O. Williams, O. A. O. Akinwolere, R. Shabo, G. V. Alm, and H. Wigzell | 2296 | Positive Correlation Between Degree of Parasitemia, Interferon Titers, and Natural Killer Cell Activity in <i>Plasmodium falciparum</i> -Infected Children  |
| R. E. Rocklin, J. W. Tracy, and A. El Kholy   | 2314 | Activation of Antigen-Specific Suppressor Cells in Human <i>Schistosomiasis mansoni</i> by Fractions of Soluble Egg Antigens Nonadherent to Con A Sepharose |
| N. L. Letvin, R. S. Kauffman, and R. Finberg  | 2334 | T Lymphocyte Immunity to Reovirus: Cellular Requirements for Generation and Role in Clearance of Primary Infections   |
| Y. Charoenvit, G. H. Campbell, and S. Tokuda  | 2350 | Suppression of Parasite Antigen-Specific Lymphoid Blastogenesis in African Trypanosomiasis  |
| C. A. Nacy, M. S. Meltzer, E. J. Leonard, and D. J. Wyler   | 2381 | Intracellular Replication and Lymphokine-Induced Destruction of <i>Leishmania tropica</i> in C3H/HeN Mouse Macrophages                                      |

Continued on page 6



|   |      |  |
|---|------|--|
| G. R. Harriman, A. F. Esser, E. R. Podack, A. C. Wunderlich, A. I. Braude, T. F. Lint, and J. G. Curd | 2386 | The Role of C9 in Complement-Mediated Killing of <i>Neisseria</i>  |
| P. A. Scott and J. P. Farrell   | 2395 | Experimental Cutaneous Leishmaniasis. I. Nonspecific Immunodepression in BALB/c Mice Infected with <i>Leishmania tropica</i>   |
| J. N. Ihle, J. C. Lee, and L. Rebar   | 2565 | T Cell Recognition of Moloney Leukemia Virus Proteins. III. T Cell Proliferative Responses against GP70 Are Associated with the Production of A Lymphokine Inducing 20 $\alpha$ -Hydroxysteroid Dehydrogenase in Splenic Lymphocytes |

---

### TUMOR IMMUNOLOGY

---

|   |      |   |
|---|------|---|
| C. W. Reynolds, S. O. Sharrow, J. R. Ortaldo, and R. B. Herberman                 | 2204 | Natural Killer Activity in the Rat. II. Analysis of Surface Antigens on LGL by Flow Cytometry   |
| S. Kyoizumi, R. Kannagi, and T. Masuda  | 2252 | Membrane Expression of Fc-Receptors in Cultured Leukemic Cell Lines. I. Induction of Fc-Receptor in Undifferentiated Types of Cells after Passive Modulation of Lipid Viscosity |
| S.-K. Oh and F. L. Moolten  | 2300 | Nonspecific Immunosuppressive Factors in Malignant Ascites: Further Characterization and Possible Relationship to Erythrocyte Receptors of Human Peripheral T Cells             |
| W. L. Farrar, K. D. Elgert, and A. S.-Y. Foo                                      | 2339 | Suppressor Cell Activity in Tumor-Bearing Mice. III. Co-purification of a Factor Inhibiting Cellular DNA Synthesis and DNA Polymerase Activity                                  |
| E. A. Clark, D. Engel, and N. T. Windsor  | 2386 | Immune Responsiveness of SM/J Mice: Hyper NK Cell Activity Mediated by NK 1 <sup>+</sup> Qa 5 <sup>-</sup> Cells  |
| D. G. Kilburn, F. O. Talbot, and J. G. Levy                                       | 2465 | Characteristics of an Antigen-Specific Helper Factor That Enhances the <i>in Vitro</i> Generation of Cytotoxic Cells Directed against a Syngeneic Tumor                         |
| M. Linker-Israeli, R. J. Billing, K. A. Foon, and P. I. Terasaki                  | 2473 | Monoclonal Antibodies Reactive with Acute Myelogenous Leukemia Cells  |
| C. G. Brooks, E. A. Wayner, P. J. Webb, J. D. Gray, S. Kenwick, and R. W. Baldwin | 2477 | The Specificity of Rat Natural Killer Cells and Cytotoxic Macrophages on Solid Tumor-Derived Target Cells and Selected Variants   |
| J. M. Zarling, K. A. Clouse, W. E. Biddison, and P. C. Kung                       | 2575 | Phenotypes of Human Natural Killer Cell Populations Detected with Monoclonal Antibodies   |
| B. K. Seon, S. Negoro, J. Minowada, and K. Yoshizaki                              | 2580 | Human T Cell Leukemia Antigens on the Cell Membranes: Purification, Molecular Characterization, and Preparation of Specific Antisera  |

---

### COMMUNICATIONS

---

|   |      |  |
|---|------|--|
| M. Endoh, H. Sakai, Y. Nomoto, Y. Tomino, and H. Kaneshige        | 2612 | IgA-Specific Helper Activity of T $\alpha$ Cells in Human Peripheral Blood               |
| C. A. Sunderland, C. W. G. Redman, and G. M. Stirrat              | 2614 | HLA A, B, C Antigens Are Expressed on Nonvillous Trophoblast of the Early Human Placenta |
| M. L. Harrison and C. L. Villemez                                 | 2616 | Protein Glycosylation is Required for the Proliferation of Mitogen-Activated Lymphocytes |
| J. Seeley, K. Sakamoto, S. H. Ip, P. W. Hansen, and D. T. Purtilo | 2618 | Abnormal Lymphocyte Subsets in X-Linked Lymphoproliferative Syndrome                     |

---

### LETTER TO THE EDITOR

---

|                                  |      |
|----------------------------------|------|
| J. F. Delfraissy and P. Galanaud | 2621 |
| Announcements                    | 2622 |
| Author Index                     | 2625 |
| Ad Hoc Reviewers                 | 2627 |
| Author Index to Volume 127       | 2629 |
| Subject Index to Volume 127      | 2634 |